

# Application of Community Satisfaction Index in Service Units With Average Calculation Method

Android as Survey Aid Tools

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**Abstract**— Referring to the Universitas Mercu Buana Information System RIP, and based on previous research "Application of Web Base Based Public Satisfaction Index in Service Units, Case Study of DKI Jakarta Province Population and Civil Registration Service". In this study, we will continue from previous research on Front End using personal computers and this takes up space on the service desk, for these needs we intend to make changes or additions using the Android tab as a survey tool replacing the personal computer which will be easier to use and keep up with the latest technological developments. While the assessment parameters are still the same as the previous research, namely the global parameters of the community feel very satisfied, satisfied or dissatisfied with the service they receive from the service counter staff, which is represented by the service counters. Referring to the background of the problems in this study, the problems that can be identified are: 1. Previous research as a survey aid using computers, 2. Android tablets will be added as survey tools referring to previous research. As for the scope of the problem are as follows: 1. Research focused on updating survey tools, 2. Research focused on adding android tablets as survey tools, so that it is better than before. The main problems that will be studied in this study are: 1. Adding an android tablet as a survey tool, 2. Replacing the mouse function into a touchscreen using an android tab instead of a computer. The results of this study are the Application of Decision Making Community Satisfaction Index with Android as a Survey Tool that can be applied directly as a solution to problems that occur in the community service unit.

**Keywords** — Survey Tools; Public Satisfaction Index; Android Tablet as a Survey Tool; Very Satisfied; Satisfied; Dissatisfied.

## I. INTRODUCTION

Referring to the Universitas Mercu Buana, Information System RIP, and based on previous research "Application of Web Base Based Public Satisfaction Index in Service Units, Case Study of DKI Jakarta Province Population and Civil Registration Service".

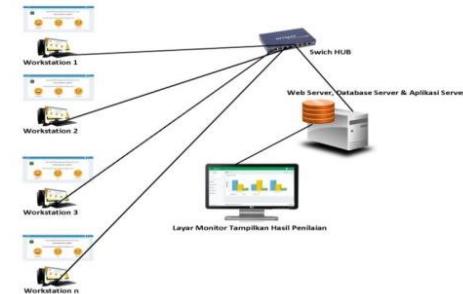


Figure. 1 Design of Research Infrastructure Previously



Figure. 2 Display of Front End Research Applications Using Personal Computer

Staff Value Report						
Date of Assessment : 01-05-2018 s/d 31-05-2018						
Staff: All Staff						
NIP	Staff Name	Very Satisfied	Satisfied	Not Satisfied	Performance	
1	Loket 1	11	3	1		Very Satisfied
2	Loket 2	6	5	2		
3	Loket 3	7	6	1		
Average		8	5	1		

Figure. 3 All Staff Assessment Report

In accordance with the Research Master Plan, we will carry out further research by following a predetermined RIP and also based on the Road Map specified in the previous study.

In this study we will continue from previous research on Front End using personal computers and this takes up space on the service desk, for these needs we intend to make changes or additions using the Android tab as a survey tool replacing the personal computer which will later be easier used and following the latest technological developments.

While the assessment parameters are still the same as the previous research, namely the global parameters of the community feel very satisfied, satisfied or dissatisfied with the service they receive from the service counter staff, which is represented by the service counters.

## II. RESEARCH PROBLEMS

### A. Identification of problems

Referring to the background of the problems in this study, the problems that can be identified are: 1. Previous research as a survey aid using a computer, 2. Android tablets will be added as survey tools referring to previous research.

### B. Restricting the problem

As for the scope of the problem are as follows: 1. Research is focused on updating survey tools, 2. Research focused on adding Android tablets as survey tools, so that they are better than before.

### C. Formulation of the problem

The main problems that will be examined in this study are: 1. Adding an android tablet as a survey aid, 2. Replacing the mouse function into a touchscreen using the an-droid tab instead of a computer.

## III. RESEARCH OBJECTIVES AND BENEFITS

### A. Research purposes

Based on the formulation of the problem, the objectives of this study are: Add Android as a survey tool and replace computer and mouse functions, and convert the front end application to an APK so that it can be used on Android.

### B. Benefits of research

The benefits of this study are expected: 1. Can provide information about the quality of performance of the service unit, 2. Can be used as a reference to improve the quality of performance of the service unit, 3. Can also be used by agencies that have the same problem.

## IV. RESEARCH METHOD

### A. Types of research

The type of research we use is applied research (Applied Research), because from the results of research can be directly used / applied to solve problems faced and the implementation of e-business design using the information systems development (ISD) method.

Traditional systems development life cycle (SDLC) methods provide structured and formal steps. But the method

needs to be changed to adjust to the conditions of information technology and needs that are increasingly complex and require flexibility and great responsiveness. Various modern methods are available for the development of complex or desired systems quickly realized such as prototyping, joint application design, object oriented development, and component-based development.

For the development of e-business in this cluster, a combination of SDLC advantages that are structured and formal, and prototyping and component based development will be applied.

In this research, Respondent Data Processing Applications will be made to Know the Performance Quality of the Service Unit.

The results of the study were in the form of respondent data processing applications.

### B. Method of collecting data

Data collection methods used in this study are: 1. Observation method. Observation or direct observation of the object of research. Observation technique is done by structured observation by preparing a list of data and data source needs, 2. Library study method. Methods of collecting data obtained by studying, researching, and reading books, information from the internet, journals, theses, e-business related theses.

## V. RESULTS AND DISCUSSION

### A. System planning

System design determines how the system will meet these objectives, in this case: hardware, software, network infrastructure; user interface, forms and reports, as well as special programs, databases, and files that will be needed. System design is an advanced stage of system analysis [12] where the system design is described the system that will be built before coding is done in a programming language. In designing a system can not be separated from the results of analysis. The system design in this study still refers to previous research, as shown in figure 4.

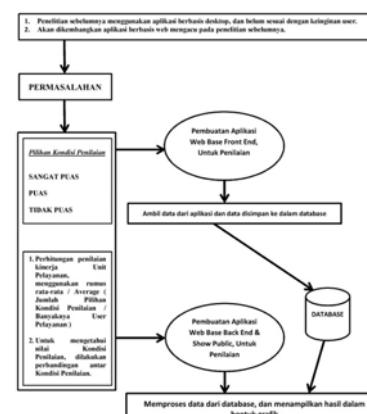


Figure. 4 Research Concept

## B. Deployment Diagram

Deployment diagram [1, 3] is a diagram that can provide an explanation of how various physical elements compile and run a system in a network that is formed. The network architecture that is formed is a collection of nodes in the form of hardware and software that configure runtime software components with processors and other equipment. Deployment details how components are deployed in system infrastructure, where components will be located (on machines, servers or PCs), how network capabilities are in that location, server specifications, and other things that are physical. A node is a server, workstation, or other hardware that is used to deploy components in the actual environment. Relations between nodes (eg TCP / IP) and requirements can also be defined in this dia-gram. In this information system there are components that support the running of the Community Satisfaction Index Application are: 1. Web Framework Laravel, a tool used to create the Community Satisfaction Index Application, 2. Xampp Web Server, used to connect databases with the Community Satisfaction Index Application, 3. The database server and localhost are stored, 4. Client Workstation as a device in the form of an Android Tablet that is used to access the Community Satisfaction Index Application on the front end, 5. Monitor / TV screen to display the results of the assessment in the form of graphics to the public, 6. The printer used to print the report.

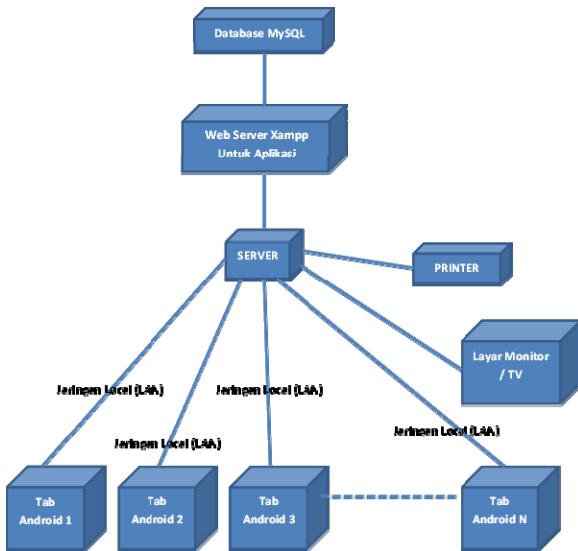


Figure. 5 Deployment Application Diagram of the Community Satisfaction Index

## C. Designing Architectural Infrastructure

This stage will explain the form or design of the Web-Based Community Satisfaction Index Application in the Community Service Unit and changes to the front end application access tool that initially uses a personal computer, is changed using an android tablet so that it can present information relating to the performance evaluation yanan community and connect the android tablet to the server using wireless technology.

The infrastructure design of the Community Satisfaction Index Application in the Community Service Unit with Android as a survey tool is as follows:

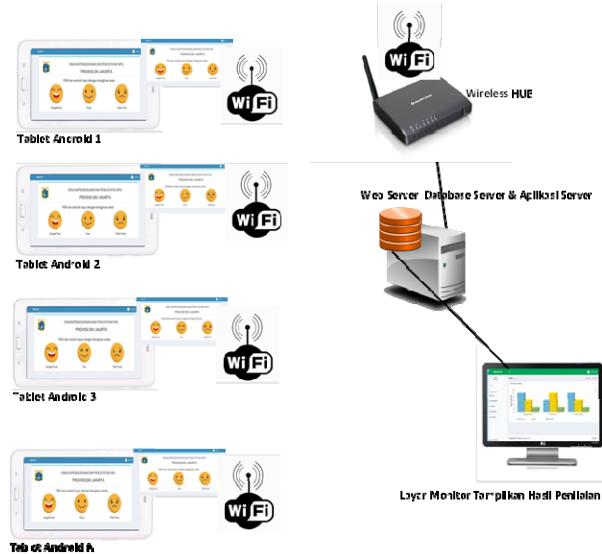


Figure. 6 Infrastructure Design

In figure 6, it looks at the infrastructure design model, which consists of:

1. Web server, database server and application server, location where the database and application are located.
2. Monitor screen, displays the results of the assessment, can be seen in figure 7.
3. Wireless HUB, the equipment used to connect the Android Tablet to the server.
4. Android tablet, the location where the rating application is located, the display looks like in figure 8.

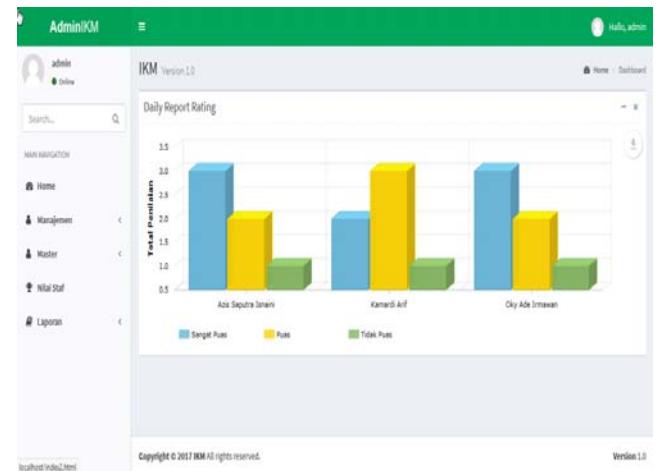


Figure. 7 Displays the Results of Assessment on the Monitor Screen



Figure. 8 Displays App Rating on the Android Tablet Screen

#### D. Interface Construction

This section will explain the implementation or construction of the appearance of the Community Base Based Satisfaction Index Application in Service Units. To explain the results of the construction will be given from each display, both the display of input, output, navigation and pages in the application that was built, and the application built still refers to previous research, but there are some improvements and additions to the functions that have not been present in the study previous.

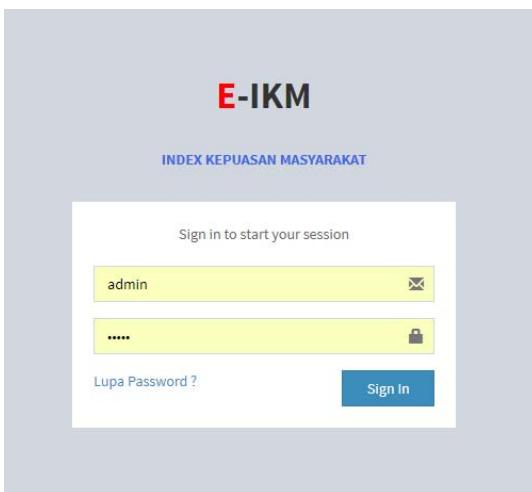


Figure. 9 Initial Appearance of the Application, namely the Login Menu

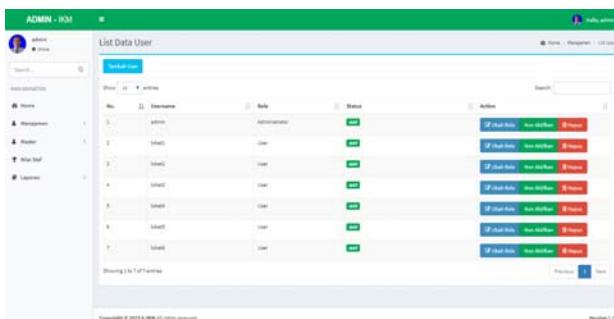


Figure. 10 Display of Back End Applications, Menu List of User Data

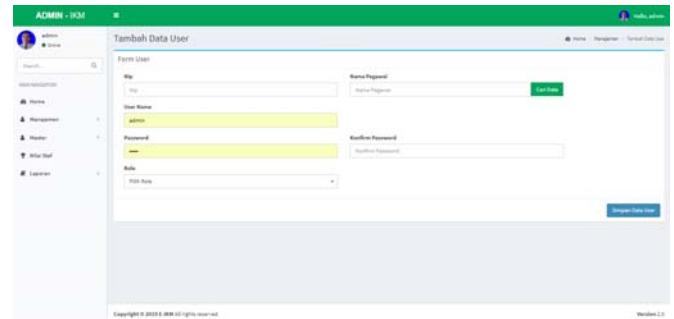


Figure. 11 Display Back End Applications, Add User Data Menu

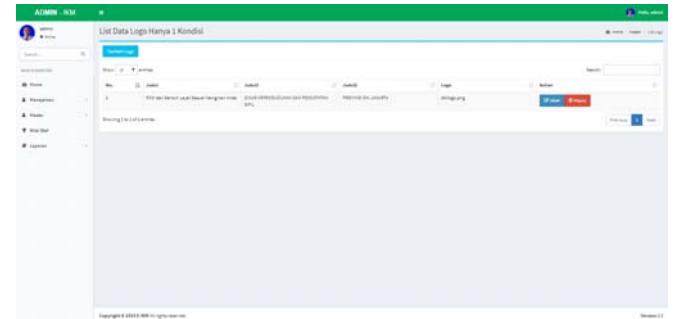


Figure. 12 Display Back End Application, Logo Data List Menu

In the view shown in Figure 12, there are additional feature titles1 and titles that have not been found in previous studies.

In figure 13, a user transaction log is seen using the front end application which is represented by the rating criteria, Very Satisfied, Satisfied and Not Satisfied, these results can be seen in Figure 8 and Figure 13.

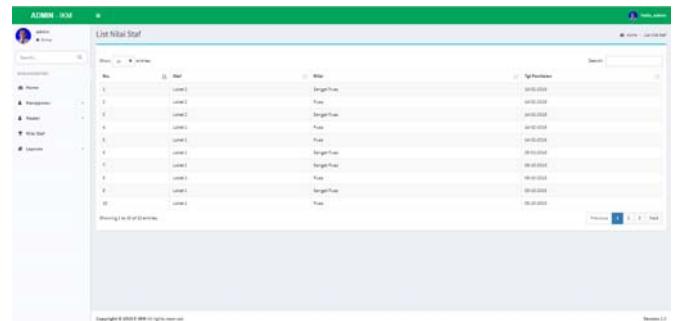


Figure. 13 Display of Back End Applications, Menu List of Staff Value

The report display is the same as Figure 3.

Information:

Service weight = 1/3 (User / User Number)

Button Icon on Application = Very Satisfied, Satisfied, Dissatisfied (Choice of Decision, figure 8)

Quality Value = Comparison between the number of decision choices, which are formulated as follows:

= IF (C10 > D10, IF (C10 > E10, A16, A17), IF (D10 > E10, A17, A18)), referring to figure 3, for the average using the "Average" formulation.

In figure 3 there is a form of report that appears in the form of spreadsheets, the measurement of performance quality is done is measuring the performance of each user, based on very satisfied, satisfied or dissatisfied people for the services provided by each user.

The satisfaction measurement can be used to provide an assessment of the performance of each user, or a performance appraisal of the service unit that is combined by all the users involved, will result in the performance value of the community service unit, can be seen in Figure 3.

## VI. CONCLUSIONS

Based on the discussion of the results of the research discussed in the previous chapter, then in the study of Community Satisfaction Index Applications in the Community Service Unit Using Android as a Survey Tool, conclusions and suggestions can be taken as follows:

1. Based on previous research the front end assessment application uses a work-station computer, and is changed so that it can be run on an android tablet media. And it can be concluded that this research is going well, front end assessment applications can run well on android tablet media.
2. In this study also improve and add features that have not existed in previous studies on back end applications.
3. The results of this study are the Application of Decision Making Community Satisfaction Index with Android as a Survey Tool that can be applied directly as a solution to problems that occur in the community service unit.
4. The resulting data is the same as the previous research and can be used to measure the performance of users and service units, based on the level of satisfaction of the people who receive these services.
5. The results of this study can still be developed better by utilizing renewable technologies in the field of information technology.

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